

CORRES CONTROL
OUTGOING LTR NO

000045, 83

DOE ORDER# 4700 /

94 RF 10800



EG&G ROCKY FLATS INC
ROCKY FLATS PLANT P O BOX 464 GOLDEN COLORADO 80402 0464 (303) 966 7000

DIST	TR	ENC
AMARAL M E		
BURLINGAME A H		
BUSBY W S		
BRANCH D B		
CARNIVAL G J		
DAVIS J G		
FERRERA D W		
FRAY R E		
GEIS J A		
GLOVER W S		
GOLAN P M		
HANNI B J		
HARMAN L K		
HEALY T J		
HEDAHL T		
HILBIG J G		
HUTCHINS, N M		
JACKSON, D T		
KELL R E		
KLESTER A W		
MARX, G E		
MCDONALD, M M		
McKENNA, F G		
MONTROSE, J K		
MORGAN, R V		
POTTER G L		
PIZZUTO V M		
RISING, T L		
SANDLIN, N B		
SCHWARTZ, J K		
SETLOCK, G H		
STEWART, D L		
STIGER S G		
TOBIN, P M		
VOORHEIS, G M		
WILSON, J M		

T. A. LINDSAY ✓
P. J. MARTIN ✓

CORRES CONTROL X X
ADMN RECORD/080 ✓
TRAFFIC
PATS/T130G

CLASSIFICATION

UCNI
UNCLASSIFIED ✓
CONFIDENTIAL
SECRET

AUTHORIZED CLASSIFIER
DECLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

IN REPLY TO RFP CC NO

ACTION ITEM STATUS
☐ PARTIAL/OPEN
☒ CLOSED
LTR APPROVALS

ORIG & TYPIST INITIALS

October 24 1994

94 RF 10800

Kurt Muenchow
Environmental Restoration Division
DOE RFFO

TRANSFER OF MEETING MINUTES LJPW 016 94

Action None required

Attached please find the minutes from the October 13 1994 meeting with the Colorado Department of Health and Environment (CDPHE) the Environmental Protection Agency (EPA) the Department of Energy (DOE) EG&G Inc and the Subcontractors

If you have any questions regarding this transmittal please contact me at extension 8553

Laurie J Peterson Wright
Operable Unit 7 Project Manager
OU 5 6 & 7 Closures

LJP cb

Orig and 1 cc K Muenchow

Attachment
As Stated

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

ADMIN RECORD

A-0005-000500

OPERABLE UNIT 7 INTERFACE MEETING AGENDA OCTOBER 13, 1994

Meeting Objective To discuss mitigation of wetlands resolution of final comments on the Work Plan Technical Memorandum schedule for landfill closure and the seep collection and treatment Proposed Action Memorandum

1 MITIGATION OF WETLANDS

The objective of wetlands mitigation is to mitigate the losses of wetland area incurred during the construction of the seep interceptor and during construction of the final remedy for landfill closure Assumptions and management strategies for the wetland mitigation are presented below

- Mitigation of wetlands lost during construction of the seep interceptor is not required prior to construction
- A wetlands mitigation plan must be developed and mitigation of all wetland areas lost during construction of the seep interceptor and expected to be lost during construction of the landfill cover must occur prior to construction of the final remedy for landfill closure (scheduled for summer of 1997)

CDPHE agreed

EPA agreed EPA suggests that if the Sitewide Mitigation Plan cannot accommodate the OU 7 schedule OU 7 should pursue separate mitigation

EG&G will update schedule to reflect mitigation completion 60 days prior to construction

2 FINAL COMMENT RESOLUTION

The objective of final comment resolution is to disposition the last comments received from CDPHE and EPA on the OU 7 Work Plan Technical memorandum Due to the nature of the comments received DOE proposes to address the comments in the landfill closure IM/IRA/Decision Document

OUT INTERFACE MEETING

OCTOBER 13, 1994

NAME	COMPANY	PHONE
MIRA VARG	STOLLER	546-4417
MARV EISENBEIS	STOLLER	546 4474
Laura Brooks	EGAG EKPD	966 6973
Tom Lindsay	EGG/ER	966-6985
Laurie Peterson-Wright	EGG/ER	966-8553
Carl Spreng	CDPHE	692-3358
Brian Caruso	Stoller	546-4338
Scott R Surouchak	RFFO-PME	966-3551
Rob Anderson	STOLLER	447-7220
Arthur Dorn	EPA	294-1080
FRANK CORSE	TERRAMARK	303 879 6260
Kurt Muenchow	DOE/ER	966-2184
Pete Martin	EGG/ER	966-8695

5 REVIEW AND APPROVAL OF MEETING MINUTES

CDPHE - Karl Spreng Carl Spreng

EPA - Arturo Duran Arturo Duran

DOE Kurt Muenchow Kurt Muenchow

EG&G Laurie Peterson-Wright Laurie Peterson-Wright

4 CHANGES TO THE PROPOSED ACTION MEMORANDUM

Justification

Simple system which is more appropriate for the interim action
Use of a temporary collection sump to collect at the seep allows a permanent system to be located during the landfill closure for maximum effectiveness

Cost savings will be realized by minimizing excavation shoring and dewatering

Minimizes potential environmental impacts

Eliminates vertical conduit through the landfill cap

Design

- Collection

Storage

AD Agreed

3 LANDFILL CLOSURE SCHEDULE

Objective Review the current working schedule to determine downstream milestones

Background

During the Process Improvement Proposal process, the OU 7 schedule was streamlined to recover delays incurred in the initial phase of the Interagency Agreement schedule. During interface meetings held previously with CDPHE and EPA extended review periods were requested. These suggestions were incorporated resulting in the current working schedule from which milestones were proposed. There is no schedule contingency and landfill closure activities are on the critical path.

See ACTION UNDER WETLAND MITIGATION

- AD EPA - suggests concurrent review. DOE will discuss with management and will contact EPA (Action Item)
- AD EPA/CDPHE - suggest approval of milestones to start of construction. Negotiate downstream milestones (CAD/ROD)
- AD EPA - 647 task, schedule should be submitted along with title II design. EGI/DOE will change schedule.

EPA Specific Comment 1 Figure 5 1 Figure 5 1 shows existing borehole locations along the probable slurry wall alignment and highlights boreholes that have been drilled into unweathered bedrock. The figure is intended to depict data gaps for the design of the proposed slurry wall. The text on page 5 22 states that depth to bedrock information (implying the upper bedrock surface weathered or unweathered) is needed for design of the slurry wall. The FWP should be clear whether the slurry wall will be keyed into weathered or unweathered bedrock or whether this decision has yet to be made. If the slurry wall is to be keyed into unweathered bedrock the lithologic criteria used to determine weathered or unweathered bedrock should be identified and depths to unweathered bedrock should be provided on Figure 5 1.

Resolution The decision of whether to key into weathered or unweathered bedrock will be made during options analysis in the IM/IRA/DD

Agreed AP

EPA Specific Comment 2 Section 6 4 2 Page 6 14 Paragraph 3 This section states that drawdown recovery testing will be conducted in open boreholes and in monitoring wells as part of the field effort. The text then describes procedures that will be followed for drawdown testing in monitoring wells. The text should also provide the procedures that will be used in open holes so the quality of the resulting data can be evaluated.

Resolution The drill rig was unable to reach the locations of the two proposed boreholes for drawdown recovery testing. A document modification request will be processed to change the text if additional drawdown recovery tests will be performed.

Agreed AD

EPA General Comment 2: Section 5.6 of the FWP describes how the data quality objective (DQO) process evaluates remedial actions for landfill cap design and landfill closure. An issue that is not discussed in this section but could affect the landfill cap design is the implementation and continued operations of the seep collection system that will be presented in the Proposed Action Memorandum (PAM) for OU 7. Although the design and operation of the system will be addressed in the PAM, rather than in this document, implementation of the system may affect the landfill cap design by providing a potential vertical conduit through the cap. Data collection activities for the PAM are addressed to some degree in the FWP but it is not clear if the collection system's impacts on the integrity of the cap have been assessed. For this document to be considered complete, a discussion of the collection system's potential impact to the landfill cap integrity should be included in Section 5.6.

Resolution: The seep collection system has been evaluated and a simpler design with reusable parts will be installed. The operation of the seep collection system will occur until construction of the landfill cover begins. The equipment can be moved and reused to support final closure without providing a potential vertical conduit through the cap. This design will be presented in the Proposed Action Memorandum.

Agreed AD

CDPHE, Comment 5 Section 5 5 7 2 and Figure 5 1 The alignment of the proposed slurry wall is meant to enclose groundwater contamination on the south side of the landfill However Figure 5 1 shows the wall to the north of OU 6 166 X and very close to the predicted plumes shown in Section 4 To err on the side of safety the wall should encompass these potential sources

Resolution The goal of the presumptive remedy is *source containment* The OU 6 166 X IHSSs will be evaluated to determine if they are contributing sources to the groundwater plume If so the IHSSs will be encompassed by the landfill cover and slurry wall The extent of the slurry wall will be discussed in detail in the IM/IRA/DD

AD
Agreed

CDPHE, Comment 6 Section 6 1 The fate of IHSSs 167 2 and 167 3 (and the OU 6 IHSSs as well) are not dictated by the presumptive remedy approach 167 2 and 167 3 just happen to be conveniently under the proposed cap

Resolution Based on the present design of the presumptive cap soils in IHSSs 167 2 and 167 3 will be contained If the options analysis results in a different design for the cap residual risk will be calculated for these areas during the post closure risk assessment

AD
Agreed

EPA, General Comment 1 Action specific applicable or relevant and appropriate requirements (ARARs) should be summarized in the document The text vaguely refers to design criteria in Colorado Hazardous Waste Act (CHWA) and Resource Conservation and Recovery Act (RCRA) regulations in several sections but never provides a concise summary of the design components and standards that are considered ARARs A summary of ARARs is necessary to allow the reader to evaluate the adequacy of Sections 5 and 6

Resolution A detailed ARARs discussion will be provided in the IM/IRA/DD

AD
Agreed

CDPHE Comment 3. The presumptive remedy and streamlined approach do not eliminate the need for IAG deliverables unless specifically so amended by the agencies. This Technical Memorandum serves as the Phase I RFI/RI Report and the Phase II RFI/RI Workplan

Resolution None required

Agreed

CDPHE Comment 4 Section 4.3- "The use of Rock Creek data is adequately discussed in our separate correspondence titled "OU 7 PAM and Background soil", dated September 8 1994. It is likely that the background surficial soils data set that will drive COC selection and any post-closure remedial decision will be different from the one used for this report.

Along those lines, the Appendix M data disk still does not contain results of the not measurement test for surficial soils (only groundwater). We requested this data in our comments on the draft report because the majority of PCOCs in surface soils were selected as a results of having failed the not measurement test (Table 4-13). This is important because it is the soils, in the absence of established standards, that *must* undergo the background comparison/COC selection process prior to an assessment of risk. The specifics of the surficial soils COC selection methodologies (including background issues) are not a driver for the closure action but are *essential* for the post-closure risk assessment and must be adequately addressed at that time

1

Resolution It is agreed that a different data set may be used for COC selection and post-closure remedial decision. Available background data will be used as appropriate at that time

The Appendix M data disk has been revised and will be available with the final transmittal of the Technical Memorandum.

EPA - AD

Agreed

2 FINAL COMMENT RESOLUTION

The objective of final comment resolution is to disposition the last comments received from CDPHE and EPA on the OU 7 Work Plan Technical memorandum. Due to the nature of the comments received DOE proposes to address the comments in the landfill closure IM/IRA/Decision Document

CDPHE Comment 1 Executive summary and Section 1.3.1 The reference to the potential disposition of the OU 6 IHSSs (depending on the outcome of the OU 6 investigation) as a consolidation into the OU 7 closure under the CAMU concept are inappropriate. The Division has made the preliminary determination that a CAMU is not feasible at OU 7 due to CAMU's regulatory obligation to satisfy the 6 CCR 1007.2 Part 2 Requirements for Siting of a Hazardous Waste Disposal Sites and OU 7's inability to meet those requirements. If action is necessary to mitigate risks at these IHSSs removal to or remediation at a separate location will be required.

Resolution. It is agreed that the CAMU concept is not a viable alternative and the disposition of the OU 6 IHSSs will be addressed in the IM/IRA/DD. If the IHSSs are determined to be a source of contamination they will be encompassed by the landfill cover and slurry wall.

Agreed AD

CDPHE Comment 2 Executive Summary Section 1 Section 5.4 Any soils in the spray evaporation areas around the East Landfill Pond (ELP) that are not secured under the presumptive cap must also be evaluated against risk based criteria. The document assumes (perhaps correctly perhaps not) that *all* soils will be covered and focuses instead exclusively on soils downgradient of the ELP embankment. Figure 6.1 of the draft report showed verification sample locations that were on the north and south edges of the sampling grid. If any of these locations will fall outside of the proposed cap (based on its preliminary design) they may need further investigation.

Resolution Based on the preliminary design of the landfill cap all soils will be covered. If the design changes residual risk will be calculated for those areas during the post closure risk assessment. CDPHE has previously stated that verification sampling is not necessary. It is agreed that additional sampling to determine the areal extent of contamination may be necessary before surface soils that present a risk to human health can be remediated.

Agreed M

OPERABLE UNIT 7 INTERFACE MEETING AGENDA OCTOBER 13, 1994

Meeting Objective To discuss mitigation of wetlands, resolution of final comments on the Work Plan Technical Memorandum schedule for landfill closure and the seep collection and treatment Proposed Action Memorandum

1 MITIGATION OF WETLANDS

The objective of wetlands mitigation is to mitigate the losses of wetland area incurred during the construction of the seep interceptor and during construction of the final remedy for landfill closure. Assumptions and management strategies for the wetland mitigation are presented below:

- Mitigation of wetlands lost during construction of the seep interceptor is not required prior to construction
- A wetlands mitigation plan must be developed and mitigation of all wetland areas lost during construction of the seep interceptor and expected to be lost during construction of the landfill cover must occur prior to construction of the final remedy for landfill closure (scheduled for summer of 1997)

EPA - Agreed
AD

EPA - Agreed
AD

EPA - wetlands mitigation performed prior to landfill closure.

Investigate wetland mitigation separate from Site-wide program (Action for EG&G and DOE)

EG&G update schedule to reflect mitigation completion 60 days prior to construction

Arthur Duran
K. L. C.

Eliminates vertical conduit through the landfill cap

Design

Collection

Storage

CDPHE agreed

EPA agreed

5 REVIEW AND APPROVAL OF MEETING MINUTES

Meeting minutes were reviewed and signed by Arturo Duran EPA Carl Spreng CDPHE Kurt Muenchow DOE and Laurie Peterson Wright EG&G

3 LANDFILL CLOSURE SCHEDULE

Objective Review the current working schedule to determine downstream milestones

Background

During the Process Improvement Proposal process, the OU 7 schedule was streamlined to recover delays incurred in the initial phase of the Interagency Agreement schedule. During interface meetings held previously with CDPHE and EPA extended review periods were requested. These suggestions were incorporated resulting in the current working schedule from which milestones were proposed. There is no schedule contingency and landfill closure activities are on the critical path.

EPA suggests concurrent review. DOE will discuss with management and will contact EPA.

EPA/CDPHE suggest approval of milestones to start of construction and downstream milestones (CAD/ROD, etc.) can be negotiated.

EPA recommends that a construction schedule also be submitted with the Title II design.

4 CHANGES TO THE PROPOSED ACTION MEMORANDUM

Justification

- Simple system which is more appropriate for the interim action. Use of a temporary collection sump to collect at the seep allows a permanent system to be located during the landfill closure for maximum effectiveness.
- Cost savings will be realized by minimizing excavation, shoring, and dewatering.
- Minimizes potential environmental impacts.

landfill cover begins. The equipment can be moved and reused to support final closure without providing a potential vertical conduit through the cap. This design will be presented in the Proposed Action Memorandum.

CDPHE agreed

EPA agreed

EPA Specific Comment 1 Figure 5.1 Figure 5.1 shows existing borehole locations along the probable slurry wall alignment and highlights boreholes that have been drilled into unweathered bedrock. The figure is intended to depict data gaps for the design of the proposed slurry wall. The text on page 5.22 states that depth to bedrock information (implying the upper bedrock surface weathered or unweathered) is needed for design of the slurry wall. The FWP should be clear whether the slurry wall will be keyed into weathered or unweathered bedrock or whether this decision has yet to be made. If the slurry wall is to be keyed into unweathered bedrock the lithologic criteria used to determine weathered or unweathered bedrock should be identified and depths to unweathered bedrock should be provided on Figure 5.1.

Resolution The decision of whether to key into weathered or unweathered bedrock will be made during options analysis in the IM/IRA/DD.

CDPHE agreed

EPA agreed

EPA Specific Comment 2 Section 6.4.2 Page 6.14 Paragraph 3 This section states that drawdown recovery testing will be conducted in open boreholes and in monitoring wells as part of the field effort. The text then describes procedures that will be followed for drawdown testing in monitoring wells. The text should also provide the procedures that will be used in open holes so the quality of the resulting data can be evaluated.

Resolution The drill rig was unable to reach the locations of the two proposed boreholes for drawdown recovery testing. A document modification request will be processed to change the text if additional drawdown recovery tests will be performed.

CDPHE Comment 6, Section 6.1 The fate of IHSSs 167.2 and 167.3 (and the OU 6 IHSSs as well) are not dictated by the presumptive remedy approach, 167.2 and 167.3 just happen to be conveniently under the proposed cap

Resolution Based on the present design of the presumptive cap soils in IHSSs 167.2 and 167.3 will be contained. If the options analysis results in a different design for the cap, residual risk will be calculated for these areas during the post-closure risk assessment

CDPHE -agreed

EPA agreed

EPA General Comment 1 Action-specific applicable or relevant and appropriate requirements (ARARs) should be summarized in the document. The text vaguely refers to "design criteria in Colorado Hazardous Waste Act (CHWA) and Resource Conservation and Recovery Act (RCRA) regulations in several sections, but never provides a concise summary of the design components and standards that are considered ARARs. A summary of ARARs is necessary to allow the reader to evaluate the adequacy of Sections 5 and 6

Resolution A detailed ARARs discussion will be provided in the IM/IRA/DD

CDPHE -agreed

EPA agreed

EPA General Comment 2 Section 5.6 of the FWP describes how the data quality objective (DQO) process evaluates remedial actions for landfill cap design and landfill closure. An issue that is not discussed in this section, but could affect the landfill cap design, is the implementation and continued operations of the seep collection system that will be presented in the Proposed Action Memorandum (PAM) for OU 7. Although the design and operation of the system will be addressed in the PAM, rather than in this document, implementation of the system may affect the landfill cap design by providing a potential vertical conduit through the cap. Data collection activities for the PAM are addressed to some degree in the FWP but it is not clear if the collection system's impacts on the integrity of the cap have been assessed. For this document to be considered complete, a discussion of the collection system's potential impact to the landfill cap integrity should be included in Section 5.6.

Resolution The seep collection system has been evaluated and a simpler design with reusable parts will be installed. The operation of the seep collection system will occur until construction of the

Resolution None required

CDPHE Comment 4 Section 4.3 The use of Rock Creek data is adequately discussed in our separate correspondence titled "OU 7 PAM and Background soil" dated September 8, 1994. It is likely that the background surficial soils data set that will drive COC selection and any post-closure remedial decision will be different from the one used for this report.

Along those lines, the Appendix M data disk still does not contain results of the not measurement test for surficial soils (only groundwater). We requested this data in our comments on the draft report because the majority of PCOCs in surface soils were selected as a result of having failed the hot measurement test (Table 4.13). This is important because it is the soils, in the absence of established standards, that *must* undergo the background comparison/COC selection process prior to an assessment of risk. The specifics of the surficial soils COC selection methodologies (including background issues) are not a driver for the closure action but are *essential* for the post-closure risk assessment and must be adequately addressed at that time.

Resolution It is agreed that a different data set may be used for COC selection and post closure remedial decision. Available background data will be used as appropriate at that time.

The Appendix M data disk has been revised and will be available with the final transmittal of the Technical Memorandum.

CDPHE agreed

EPA agreed

CDPHE Comment 5 Section 5.5.7.2 and Figure 5.1 The alignment of the proposed slurry wall is meant to enclose groundwater contamination on the south side of the landfill. However, Figure 5.1 shows the wall to the north of OU 6.166 X and very close to the predicted plumes shown in Section 4. To err on the side of safety, the wall should encompass these potential sources.

Resolution The goal of the presumptive remedy is *source containment*. The OU 6.166 X IHSSs will be evaluated to determine if they are contributing sources to the groundwater plume. If so, the IHSSs will be encompassed by the landfill cover and slurry wall. The extent of the slurry wall will be discussed in detail in the IM/IRA/DD.

CDPHE agreed

EPA agreed

CDPHE Comment 1 Executive summary and Section 1.3 1: The reference to the potential disposition of the OU 6 IHSSs (depending on the outcome of the OU 6 investigation) as a consolidation into the OU 7 closure under the CAMU concept are inappropriate. The Division has made the preliminary determination that a CAMU is not feasible at OU 7 due to CAMU's regulatory obligation to satisfy the 6 CCR 1007.2, Part 2, Requirements for Siting of a Hazardous Waste Disposal Sites and OU 7's inability to meet those requirements. If action is necessary to mitigate risks at these IHSSs, removal to or remediation at a separate location will be required.

Resolution. It is agreed that the CAMU concept is not a viable alternative and the disposition of the OU 6 IHSSs will be addressed in the IM/IRA/DD. If the IHSSs are determined to be a source of contamination, they will be encompassed by the landfill cover and slurry wall.

CDPHE agreed

EPA agreed

CDPHE Comment 2. Executive Summary Section 1 Section 5.4 Any soils in the spray evaporation areas around the East Landfill Pond (ELP) that are not secured under the presumptive cap must also be evaluated against risk-based criteria. The document assumes (perhaps correctly perhaps not) that all soils will be covered and focuses instead exclusively on soils downgradient of the ELP embankment. Figure 6-1 of the draft report showed verification sample locations that were on the north and south edges of the sampling grid, if any of these locations will fall outside of the proposed cap (based on its preliminary design) they may need further investigation.

Resolution. Based on the preliminary design of the landfill cap, all soils will be covered. If the design changes, residual risk will be calculated for those areas during the post-closure risk assessment. CDPHE has previously stated that verification sampling is not necessary. It is agreed that additional sampling to determine the areal extent of contamination may be necessary before surface soils that present a risk to human health can be remediated.

CDPHE agreed

EPA agreed

CDPHE Comment 3. The presumptive remedy and streamlined approach do not eliminate the need for IAG deliverables unless specifically so amended by the agencies. This Technical Memorandum serves as the Phase I RFI/RI Report and the Phase II RFI/RI Workplan.